



MATERIAL SAFETY DATA SHEET
LEXMARK PRINT CARTRIDGES: OPTRA S
P/N 1382620/1382920;1382625/1382925;1382929

Revised Date: 11/09/99

Lexmark International Inc.
 740 West New Circle Rd.
 Lexington, Kentucky 40550-1876 Information: 1-859-232-3000
Emergency: 1-859-232-3333

Lexmark has determined that Material Safety Data Sheets are not required for print cartridges. For customer convenience, Lexmark provides product information in this familiar format.

SECTION 1 - CHEMICAL PRODUCTS & COMPANY IDENTIFICATION

Name: Print Cartridge for Optra S Printer

Part Number: 1382620/1382920;1382625/1382925; 1382929

Additional Part Numbers: 1382675, 1382975, 1382976, 1382935, 1382686, 12A0970,
 12A0602, 12A0603, 12A0902, 12A0903, 12A0612,
 12A0912, 12A1120, 12A0999, 12A0699, 1382936,
 12A0150, 12A0350, 12A0370, 12A0697, 1382623,
 1382626, 1382628, 1382639, 1382750, 1382923, 1382948,
 1382960

Chemical Family: Toner Cartridge

Product Use: Optra S Printer

SECTION 2 - GENERAL COMPOSITION OF TONER CONTAINED IN CARTRIDGE

COMPONENT	PERCENT (wt.)	CAS#	OSHA PEL ACGIH TLV	
Styrene Acrylic Copolymer	85 - 95	252 13-39-2	(1)	(1)
Carbon Black	3 - 8	1333-86-4	3.5 mg/m ³	3.5 mg/m ³
Particle Control Agent	< 5	(2)	15 mg/m ³ (3) 5 mg/m ³ (4)	10 mg/m ³

- Notes:** (1) Specific work place exposure limits have not been established.
 (2) Trade secret or patented molecule
 (3) Total dust
 (4) Respirable dust

SECTION 3 - HAZARDS IDENTIFICATION

Primary Routes of Entry: Inhalation of dust, skin contact.

Signs and Symptoms of Exposure : Large amounts of toner on skin or mucus membranes (mouth, eyes, or nose) may cause discomfort.

Medical Conditions Aggravated by Exposure: None known at intended levels of use.

Physical Hazards : As with most finely divided dusts, explosion is possible when extremely high concentrations of dust and an ignition source are present. Not a hazard under normal conditions of use.



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POTENTIAL HEALTH EFFECTS:

Inhalation: Short Term Exposure -

As with exposure to high concentrations of any dust, minimal respiratory tract irritation may occur if excessive amounts of toner dust are inhaled. Exposure not probable with intended use.

Long Term Exposure -

Chronic inhalation exposure to high airborne concentrations may result in irreversible adverse pulmonary effects. Significant exposure not probable with intended use.

Skin Contact: Short Term Exposure -

Test data from similar toner materials indicates this toner is not a skin irritant and is of low dermal toxicity.

Long Term Exposure -

Rare individuals may note skin rash with repeated contact. Significant exposure not probable with intended use.

Eye Contact: Short Term Exposure -

Toner may act as a mechanical irritant.

Long Term Exposure -

No adverse chronic effects known.

Significant exposure not probable with intended use.

Ingestion: Short Term Exposure -

Test data from similar toner materials indicates low oral toxicity. Exposure not probable with intended use.

Long Term Exposure -

No information available. Exposure not probable with intended use.

SECTION 4 - FIRST AID MEASURES

Inhalation: If symptoms, such as shortness of breath, are experienced, remove source of contamination or move victim to fresh air. Seek medical advice if symptoms persist.

Skin Contact: Wash affected area with soap and water. Should irritation occur, obtain medical advice.

Eye Contact: Do not rub eyes. Flush immediately with plenty of water. Remove contact lenses and continue flushing for at least 15 minutes. Seek medical attention if irritation develops and persists.

Ingestion: Immediately wash mouth out with plenty of water. If irritation occurs, seek medical advice.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: Not applicable **Autoignition:** Not available

Extinguishing Media: CO₂, water spray, dry chemical, or foam. Avoid full water jet.

Firefighting: NIOSH approved self contained breathing apparatus may be required.



Fire and Explosion Hazard: Like many finely divided materials, toner dust in high concentrations can form an explosive mixture in air which, if ignited, could result in a dust explosion.

Hazardous Combustion Products: Carbon dioxide, carbon monoxide, and low molecular weight organics.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Occupational Spill: If a dust cloud is possible due to a spill, remove all sources of ignition such as open sparks, flames or static discharge to prevent the ignition of the dust. Minimize dust generation during clean up. Sweep up spill with non-metallic broom and dust pan. Contain for disposal. To avoid possible dust explosion, do not use vacuum cleaners when large amounts of toner are involved in a spill. Oil permeated sweeping compound may assist in the cleanup of toner spilled on nonporous surfaces. Avoid inhalation of dust.

SECTION 7 - HANDLING AND STORAGE

To avoid damage to cartridge and accidental contact with toner - KEEP OUT OF REACH OF SMALL CHILDREN. STORE IN A COOL DRY PLACE

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:	None required for intended use. Mechanical room ventilation recommended.
Eye Protection:	None required for intended use in printer
Clothing:	None required for intended use in printer
Gloves:	None required for intended use in printer
Respirator:	None required for intended use in printer

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Description: Sealed cartridge contains black powdery material, with slight odor

Pressurized: No

Vapor Density (Air = 1): Not applicable

Boiling Point : Not applicable

pH: Not applicable

Water Solubility: Negligible

Flash Point: Not applicable

Softening Point Onset: 120°F

Evaporation Rate: Not applicable

% Volatility: Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Ignition sources in combustible atmospheres of toner dust, throwing toner into an open fire

Incompatibilities: Strong oxidizers



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Hazardous Decomposition Carbon dioxide, carbon monoxide, and unidentified organics

Polymerization: This product will not polymerize.

SECTION 11 - TOXICOLOGY INFORMATION

Acute Toxicity: Not acutely toxic: LD₅₀ expected to be > 5000mg/kg

Chronic Toxicity: Contents of cartridge not expected to be toxic. Industry tests on similar generic toner showed no signs of overt toxicity. Rats exposed to high levels of toner showed a chronic inflammatory response and a mild to moderate degree of lung fibrosis. There were no pulmonary changes of any type at the lower toner exposure level, which is most relevant in regard to potential human exposures. Pure carbon black, a minor component of toner, has been listed by IARC as group 2B based on rat "lung particulate overload" studies. Toner is not listed by IARC, NTP, or OSHA.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental impact rating (O-4): Not available

Acute Aquatic Toxicity: Not available

Degradability: Not available

Log Bioconcentration Factor (BCF): Not available

Log Octanol/Water Partition Coefficient: Not available

SECTION 13 - DISPOSAL INFORMATION

This product is not a listed or hazardous waste in accordance with Federal Regulation 40 CFR Part 26.1. If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal whether a material has been contaminated and should be classified as a hazardous waste. Disposal is subject to local, state and federal regulations.

SECTION 14 - TRANSPORTATION INFORMATION

This product is not regulated as a hazardous material by the DOT.



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SECTION 15 - REGULATORY INFORMATION

All ingredients are registered under the **Toxic Substances Control Act (TSCA)** or under polymer exemption.

All ingredients are exempt, registered or considered registered (polymers) under **European Inventory of Existing Commercial Chemical Substances (EINECS/ELINCS)**.

None of the product ingredients are listed as **Emergency Planning and Community Right-to Know Act (EPCRA)- Section 302: Extremely Hazardous Substances (EHS)**.

None of the product components are present above the minimum quantities of listed chemicals in **EPCRA Section 313 Supplier Notification**.

This product contains no known materials which the State of California has found to cause cancer, birth defects or other reproductive harm - **California Proposition 65**.

SECTION 16 - OTHER

Disclaimer: Data is most current known to Lexmark at the time of preparation and is believed to be accurate. No warranty as to its accuracy or completeness is expressed or implied.